Abarna_day84

```c
#include <stdio.h>
#include <stdbool.h>

bool is_safe(int node, int graph[101][101], int colors[], int N, int color) {
    for (int i = 0; i < N; i++) {
        if (graph[node][i] && colors[i] == color) {
            return false;
        }
    }
    return true;
}

bool graph_coloring_util(int graph[101][101], int M, int colors[], int N, int node) {
    if (node == N) {
        return true;
    }
    for (int c = 1; c <= M; c++) {
        if (is_safe(node, graph, colors, N, c)) {
            colors[node] = c;
            if (graph_coloring_util(graph, M, colors, N, node + 1)) {
                return true;
            }
            colors[node] = 0;
        }
    }
    return false;
}

int graph_coloring(int graph[101][101], int M, int N) {
    int colors[101] = {0};
    return graph_coloring_util(graph, M, colors, N, 0);
}

int main() {
    int T;
    scanf("%d", &T);
    while (T--) {
        int N, M, E;
        scanf("%d %d %d", &N, &M, &E);
        int graph[101][101] = {0};
        for (int i = 0; i < E; i++) {
            int u, v;
            scanf("%d %d", &u, &v);
            graph[u][v] = 1;
            graph[v][u] = 1;
        }
```

```c
        printf("%d\n", graph_coloring(graph, M, N));
    }
    return 0;
}
```